Grizzly Bear Conservation In The Alberta Yellowhead Ecosystem

A Strategic Framework

Northern East Slopes Environmental Resources Committee
February 2000

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Table of Contents

Executive Summary ii
Introduction 1
Purpose of the Strategic Framework 1
Benefits 1
Guiding Principles and Working Assumptions 2
Goal 3
Definition of Area 3
Government of Alberta Policy Context 5
Government of Canada Mandate 6
Alberta/Jasper National Park Inter-Agency Agreements 7
Linkages to Other Grizzly Bear Research Initiatives 7
Suitable Landscape Conditions 8
Management Team 10
Research Support 11
Resources 11
Work Plan 11
Effective Dates 12
Termination 12
Glossary of Terms 13
List of References 15
Approval Page 16

List of Figures

Figure 1 Grizzly Bear Strategic Framework – The Alberta Yellowhead Ecosystem 4
Figure 2 NES Regional Planning Linkages 6
Figure 3 Adaptive Management and the Sustainable Forest Management Hierarchy 9
Figure 4 Grizzly Bear Conservation in the Alberta Yellowhead Ecosystem – A Strategic Framework 12

List of Appendices

Appendix 1 Excerpts from Federal Government Response to the Environmental Assessment Report of the EUB-CEAA Joint Review Panel on the Cheviot Coal Project 17
Appendix 2 Text of letters dated September 23, 1997 from J.R. Nichols, Acting Deputy Minister, Alberta Environmental Protection to Mr. Wayne Wouters, Deputy Minister, Fisheries and Oceans Canada, Mr. Ian D. Glen, Deputy Minister, Environment Canada, and Mr. Thomas Lee, Assistant Deputy Minister, Parks Canada 19
Appendix 3 Work Plan Outline and Landscape Condition Hypotheses 21
Appendix 4 Terms of Reference – Northern East Slopes – Environmental Resource Committee 23
Appendix 5 Stakeholder Consultation Process 25

Executive Summary

Grizzly Bear Conservation in the Yellowhead Ecosystem - A Strategic Framework (the Strategic Framework) describes a collaborative approach between Jasper National Park and Alberta Environment for the conservation of grizzly bears in the Alberta-Yellowhead ecosystem. It describes the goals and objectives, the guiding principles and working assumptions and consultation process used to establish support among industry and other stakeholders for the Strategic Framework. The implementation mechanisms are described together with a 5-year research program that was established to support the management goals.

Grizzly bears are considered an excellent indicator of ecosystem integrity. The species is wide ranging and is sensitive to development and other human use pressures. Grizzly bear populations often range across multiple jurisdictions and an integrated management approach is required to ensure their long-term persistence. To date, management of grizzly bears in the Canadian Rockies has focussed on research to learn more about the species and its habitat and behaviour. The Strategic Framework strives to translate the data collected from intensive research programs into management objectives that will help to ensure the continued persistence of the species.

The Strategic Framework was developed over a two-year period in full consultation with government, industry and public stakeholders in the study area. The document commits to the establishment of suitable landscape conditions, which will need to be met to ensure the continued presence of grizzly bears on the landscape. These landscape conditions will be developed based on research currently being carried out in this area and vetted by a Regional Carnivore Management Group (RCMG), which will include representation from government and industry. The RCMG will be responsible for implementing the management directions outlined in the Strategic Framework and submitting them for approval and adoption by land and resource managers in the region. Through this process, the continued collaboration of all partners in the management of this species will be ensured.

The Strategic Framework is a long-term management strategy, which will incorporate and adapt to new information as it becomes available from research programs and other sources.

Introduction

It is widely recognized that the grizzly bear is an important indicator species of the ecological health of a natural system. It is also recognized that maintenance of conditions favourable for this species will result in conditions beneficial to a wide range of other wildlife. Generally, grizzly bear populations have declined over time in North America and, while healthy populations still exist in western Canada, the species is considered vulnerable. The grizzly is widely seen as a symbol of Canadian wilderness and is a focus of public scrutiny (Barrett, 1998). As human use demands increase on the landscape, it is imperative that governments at all levels work with other land users to ensure the persistence of the species.

There is some urgency in putting a more coordinated management program in place in the Alberta Yellowhead Ecosystem. The region is thought to have approximately 30% of the provincial grizzly bear population. The current population status of the species in the region is not well known and regional habitat conditions need to be confirmed. The species has low resilience to population and habitat pressures and is sensitive to human caused stresses. New and expanding industrial developments, human settlements and recreational use in the region are increasing these pressures and stresses. Significant investments in time and money are necessary to collect quality scientific information. For all of these reasons, a new bold, coordinated approach to management is necessary if we are to effectively manage the ecological needs of grizzly bears.

Purpose of the Strategic Framework

The Strategic Framework recognizes that the conservation of the grizzly bear requires a cooperative approach by all land and resource managers, disposition holders and stakeholders. Such cooperative initiatives must operate at a variety of appropriate spatial and temporal scales over a large regional landscape.

This document:

- establishes the framework of cooperation between Alberta Environment and Jasper National Park to achieve grizzly bear conservation in the Alberta Yellowhead Ecosystem, which is defined in Figure 1;
- provides the context for specific mitigation, enhancement and research programs implemented at smaller scales to contribute to long-term grizzly bear conservation; and
- provides mechanisms that will ensure effective involvement of provincial disposition holders and non-disposition holder interests in achieving the overall goals.

Benefits

The primary beneficiary of a cooperative approach to grizzly bear conservation is the species itself through the maintenance of bear habitat in the region. Because of the grizzly bear's position as an umbrella species, there will be benefits to other species and therefore to the overall goal of biodiversity conservation.

The Alberta Yellowhead Ecosystem has many industrial land users and will likely attract new users in the future. A key ingredient in maintaining or gaining public acceptance for new and expanded developments will be our ability to maintain a healthy and functional ecosystem across the regional landscape. Demonstrated leadership by government, industry and non-industry interests towards achieving this common goal will benefit those particular interests whether it is in public forums, in the marketplace or corporate boardrooms. This will place Alberta in a stronger and more competitive position in world markets.

Through a cooperative approach, the Strategic Framework provides an opportunity for government, industry and others to achieve grizzly bear conservation at reduced long-term cost. Because of the wide-ranging nature of the species, effective management is better achieved through cooperative arrangements involving all stakeholders. Further benefits will also be evident in the form of addressing regulatory requirements such as environmental impact assessments, management plans and approvals.

The benefits, tasks and costs must be shared equitably among all constituencies. Funding formulas will be developed in the work plan to define these sharing arrangements.

Guiding Principles and Working Assumptions

The following principles and working assumptions are consistent with the Alberta Government's environmental, social and economic direction outlined in its Commitment to Sustainable Resource and Environmental Management. They are intended to govern specific cooperative grizzly bear conservation activities undertaken by land managers, partners and stakeholders within the Strategic Framework.

1. Government agencies must provide the necessary leadership through mutual commitment to sustainable and integrated land use management within the regional ecosystem. This leadership provides the context for industrial, tourism, government, aboriginal peoples and other stakeholder interests to plan, develop, implement and manage activities to conserve carnivore populations and habitat conditions while accommodating a diverse range of land uses on a sustainable basis.

2. Grizzly bear conservation is part of an overall integrated resource management strategy rather than a stand-alone program. Both initiatives recognize that achieving environmental, economic and community goals are best accomplished through integrated resource management based on the following principles:
   - stewardship and wise use of resources;
   - accurate, thorough and peer reviewed research information;
   - communication, understanding and participatory decision-making;
   - public and staff understanding;
   - processes and plans to develop coordinated objectives;
   - cooperative partnerships and the willingness among stakeholders to succeed;
   - adaptive management techniques for evaluation and improvement; and
   - recognition of uncertainty and the need to maintain future options.

3. Jasper National Park and Alberta Environment have the mandate and are accountable for the management of wildlife within their respective jurisdictions. Each agency remains solely responsible and accountable for management decisions within their respective jurisdictions.

4. This Strategic Framework is not intended to imply authority or right of involvement of the federal government in provincial decision-making outside those triggered through the *Canadian Environmental Assessment Act*.

5. This Strategic Framework does not alter current policies and procedures for new industrial, recreational or other developments nor does it alter the Alberta government's policy to honour existing commitments. Achieving the goals of this Strategic Framework may require the exploration of innovative approaches. Such approaches should use existing processes and the principles of sound science, review of evidence by principals, equity of treatment and the use of socio-economic impact analysis.

6. Sustainable development refers to development that ensures that the use of ecological resources and ecosystems today does not damage prospects for their use by future generations (Canadian Council of Resource and Environment Ministers, 1987). It is based on resource uses that maintain landscape structure and functions at a variety of spatial scales over a long period recognizing the natural dynamics of the ecosystem.

7. No one organization can achieve the goals alone. Equitable financial and in-kind contributions by all Strategic Framework stakeholders is necessary.

8. Development of suitable landscape conditions for grizzly bear conservation will be based on research conducted in the Strategic Framework area, will consider the best scientific information available and must be applied in an adaptive manner.

9. Harmonization of federal and provincial bear management efforts is required.

10. Communications must be maintained with all land users to ensure effective participation in Strategic Framework implementation.

11. Implementation of this Strategic Framework must reflect an orderly transition from present practices to those necessary to meet grizzly bear conservation goals and that this transition will occur over space and time.

Goal

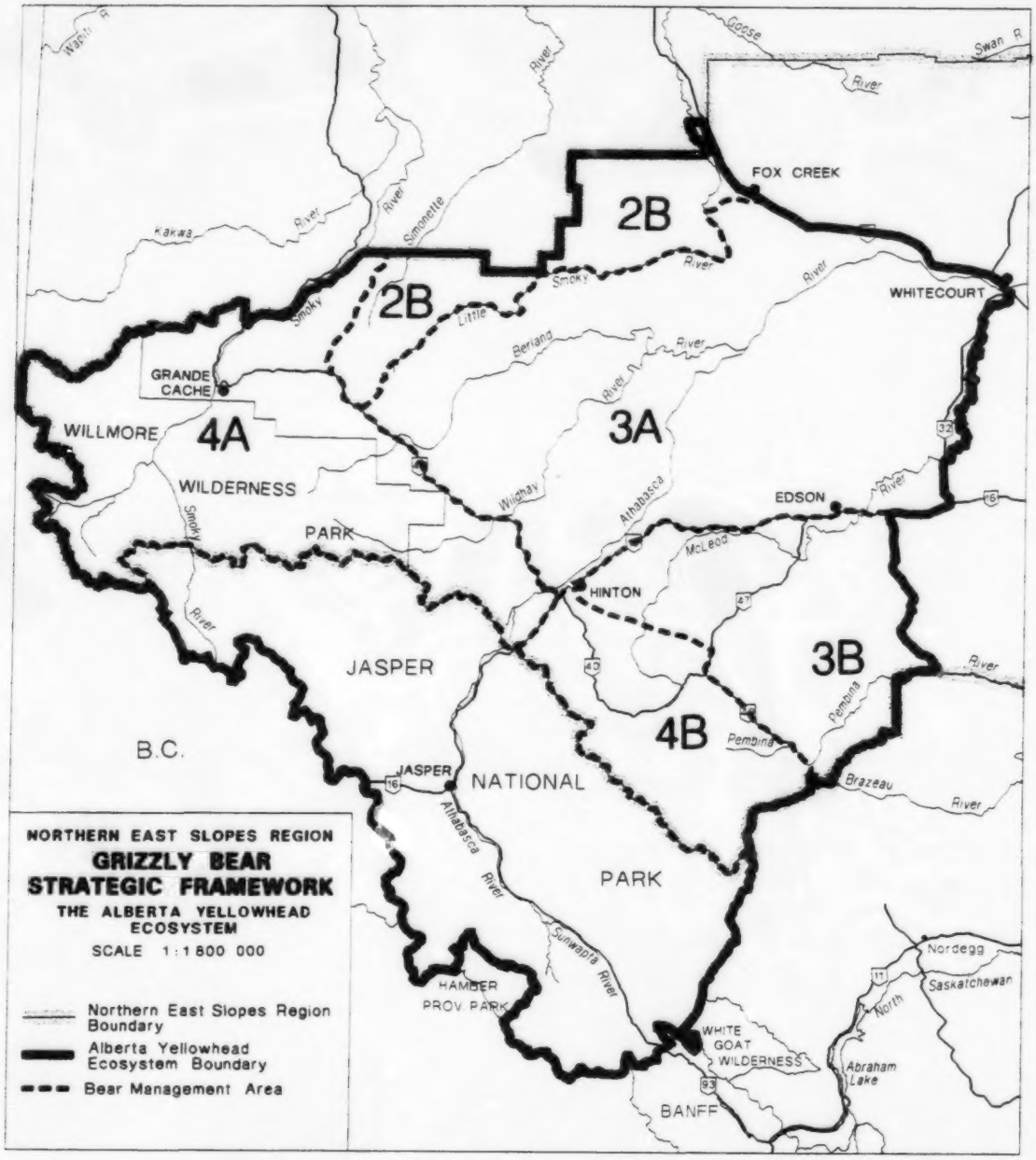
The goal is to cooperatively manage for landscape and population conditions necessary to ensure the long-term persistence of a healthy population of grizzly bears within its current range in the Alberta Yellowhead Ecosystem (Figure 1). This implies a biologically appropriate population size and distribution in order to minimize the risk to survival and maximize the probability of persistence of grizzly bears.

The goals of the Strategic Framework will be achieved through the use of existing administrative mechanisms such as Park Management Plans, Forest Management Plans, hunting regulations, Forest Management Agreements, Lease and *Alberta Environmental Protection and Enhancement Act* approval terms and conditions and requirements for environmental impact assessments.

Definition of Area

The landscape context for the Strategic Framework for grizzly bear conservation is the western portion of the Northern East Slopes Region including Jasper National Park, a total area of 41,000 km^2 (Figure 1). This area is referred to as the Alberta Yellowhead Ecosystem. With the addition of membership from Jasper National Park, members of the extended Environmental Resource Committee (ERC) have authority for land and resource management over this entire area (refer to principle 3 on page 2). Definition of this landscape scale area provides greater flexibility to manage land use disturbances over space and time. For research purposes, it is recognized that the study area boundary will be flexible enough to accommodate the spatial scale at which grizzly bear populations function.

Figure 1 – Grizzly Bear Strategic Framework – The Alberta Yellowhead Ecosystem



Government of Alberta Policy Context

The Strategic Framework exists within and takes direction from several other policies and initiatives of the Government of Alberta. Overall policy direction is provided by Alberta's Commitment to

Sustainable Resource and Environmental Management (Government of Alberta, 1999). The document reconfirms the government's commitment to sustainable development and describes Alberta's approach to sustainable resource and environmental management. It also provides the umbrella direction for programs such as Alberta's commitment to the Canadian Biodiversity Strategy, the Alberta Forest Legacy and Alberta Special Places. These initiatives recognize the need to balance opportunities for growth with the need to preserve and maintain a healthy environment for future generations. A consistent theme in all of these documents is that species diversity will be maintained and that natural resources will be managed to provide a range of products and values.

The Fish and Wildlife Policy for Alberta (1982) governs the management of wildlife species in the province. It states that one of the primary considerations of the government is to ensure that wildlife populations are protected from severe decline and that viable populations are maintained. Alberta Environment classifies the grizzly bear as a "blue list" species, or one that may be at risk because of non-cyclical declines in population or habitat, or reductions in provincial distribution. The Government of Alberta released its Management Plan for Grizzly Bears in Alberta in 1990 (Alberta Forestry, Lands & Wildlife, 1990). Key commitments in the plan are to increase the provincial grizzly bear population to 1000 animals and to coordinate management of shared grizzly populations with neighbouring wildlife agencies. The Management Plan also notes that the largest continuous block of habitat occurs in west central Alberta, extending from the BC border east to include the area from Jasper National Park, Willmore Wilderness north and northeast to Grande Prairie, Swan Hills and Edson. This area also provides the greatest opportunity to increase grizzly bear populations in Alberta through intensive management and conservation programs (Alberta Forestry, Lands & Wildlife, 1990).

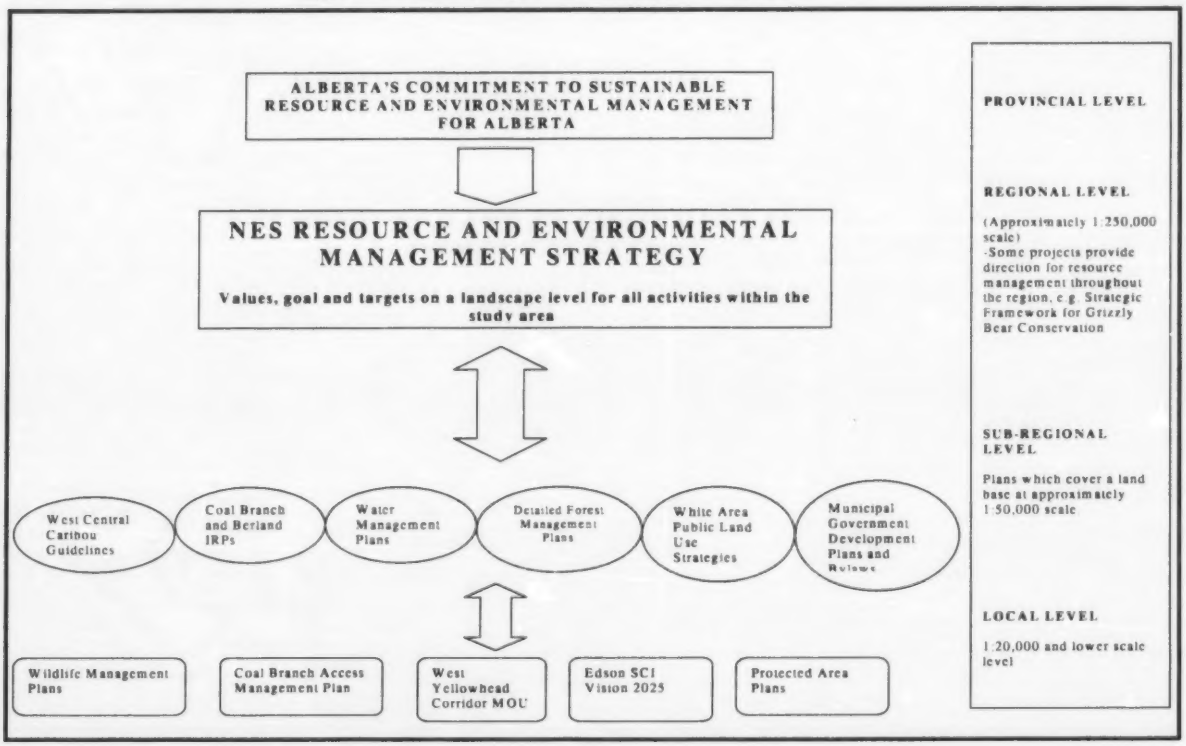
Using the provincial policies as guiding principles, implementation of management approaches under this Strategic Framework will occur under the guidance of the Northern East Slopes ERC. The ERC is currently involved in or initiating activities relating to integrated land use planning, regional access management, parks and protected areas management planning, water management planning and the review of environmental impact assessments for industrial developments. The development of approaches to manage indicator or "at risk" species such as grizzly bear and woodland caribou is another component of the ERC's responsibilities.

The ERC is responsible for ensuring that the various regional resource management activities in the region are consistent with provincial policy direction. Alberta's Commitment to Sustainable Resource and Environmental Management outlines the development of regional strategies for integrated resource management. The strategies would provide key goals and objectives for resource management in the region and describe the linkages between the various initiatives described in the previous paragraph. Pilot projects are now being initiated to develop a planning methodology. The Northern East Slopes Region has been selected as one of the provinces regional landbases for the development of a Resource and Environmental Management Strategy prototype (the NES Strategy). The NES Strategy will provide a significant context for grizzly bear management.

The NES Strategy will integrate all ecological, social and economic values to develop management objectives for the region. Linkages to the Strategic Framework will be two-way, first in the provision of threshold and recommended target landscape conditions for grizzly bear conservation from the Strategic Framework to the NES Strategy. Secondly, it will provide overall objectives that integrate all ecological, social and economic values from the NES Strategy to the Strategic Framework in the form of target landscape conditions. This two-way linkage is described on Figure 2, which illustrates connections between the NES Strategy and other planning levels and initiatives. It should be recognized that the NES Strategy is in its early stages of development and future refinement and adaptation of these linkages will occur.

Although the NES Strategy is still under development, the ERC feels that the various components can proceed with overall direction and integration provided by the ERC. The Strategic Framework will provide the tools to manage the species more effectively and will be adapted over time to ensure that the tools are appropriate and that they do not conflict with other management activities underway to address other issues or species requirements.

Figure 2 – NES Regional Planning Linkages


ALBERTA'S COMMITMENT TO SUSTAINABLE RESOURCE AND ENVIRONMENTAL MANAGEMENT FOR ALBERTA
NES RESOURCE AND ENVIRONMENTAL MANAGEMENT STRATEGY
Values, goal and targets on a landscape level for all activities within the study area
West Central Caribou Guidelines
Coal Branch and Berland IRPs
Water Management Plans
Detailed Forest Management Plans
White Area Public Land Use Strategies
Municipal Government Development Plans and Bylaws
Wildlife Management Plans
Coal Branch Access Management Plan
West Yellowhead Corridor MOU
Edson SCI Vision 2025
Protected Area Plans
PROVINCIAL LEVEL
REGIONAL LEVEL
(Approximately 1:250,000 scale)
-Some projects provide direction for resource management throughout the region, e.g. Strategic Framework for Grizzly Bear Conservation
SUB-REGIONAL LEVEL
Plans which cover a land base at approximately 1:50,000 scale
LOCAL LEVEL
1:20,000 and lower scale level

Government of Canada Mandate

The Committee on the Status of Endangered Wildlife in Canada (COSEWIC) categorizes the grizzly bear as "vulnerable" to human disturbance. Section 5(1.2) of the *National Parks Act* (1988) states that the "maintenance of ecological integrity through the protection of natural resources shall be the first priority when considering park zoning and visitor use in a management plan". This is reiterated in section 2.1.2 of the Parks Canada *Guiding Principles and Operating Policies* (1994). In section 3.1.1 of the same document, it states that "National Park ecosystems will be given the highest degree of protection to ensure the perpetuation of natural environments essentially unaltered by human activity".

Jasper National Park has a clear mandate to protect the ecological integrity of the park. Implicit in this is the need to ensure that indicator species such as the grizzly bear are protected. While the mandate to ensure this inside the park is clear, it is equally clear that for such a wide ranging species as the grizzly bear, its conservation can only be achieved through cooperative land use programs with neighbouring jurisdictions. The mandate is also made clear in Parks Canada's *Guiding Principles and Operating Policies*, which states that "Parks Canada will seek mutually satisfactory solutions to transboundary concerns associated with the management of shared ecosystem components, the effects of adjacent land use practices on park ecosystems, or the effects of park management practices on the use of adjacent lands."

Alberta/Jasper National Park Inter-Agency Agreements

As a follow-up to the report of EUB-CEAA Joint Panel on the Cheviot Coal Project (EUB, CEAA, 1997), Alberta Environment and Parks Canada, Jasper National Park agree to the following as additional policy basis for the Strategic Framework for grizzly bear conservation.

- The Strategic Framework establishes actions and cooperative working arrangements necessary to address concerns expressed by the Government of Canada in the Federal Response to the Joint Federal / Provincial Panel report on the Cheviot Mine. These concerns relate to the need for the ongoing partnership between the two governments "...to ensure transboundary environmental effects which would threaten the long-term persistence of grizzly bear populations in Jasper National Park are mitigated" (Government of Canada 1997)(Appendix 1).

- The two September 23, 1997 letters from J.R. Nichols, Acting Deputy Minister, Alberta Environmental Protection (Appendix 2) set out the formative agreements between Parks Canada and Alberta Environment.

- The Environmental Resource Committee's letter of February 2, 1999 (Lamb, 1999) to the Alberta Energy and Utilities Board (AEUB) and the AEUB's response dated February 18, 1999 (Creasey, 1999) set out the relationship between the Strategic Framework and Cardinal River Coals' obligations in the area of carnivore compensation. The AEUB has recognized involvement in and contribution to the Strategic Framework as one means by which disposition holders can fulfill requirements associated with project approvals.

- Alberta Environment and Jasper National Park agree to harmonize their respective Bear Management Unit boundaries where they meet along the Jasper National Park boundary.

- Specific to the Cheviot cumulative effects area, effective landscape connections through Fiddle, Pick, Rocky and Ruby passes will be maintained.

Linkages to Other Grizzly Bear Research Initiatives

This Strategic Framework addresses management in the regional area outlined in Figure 2. Similar conservation efforts are occurring at a number of different scales both within and adjacent to the Strategic Framework area. It is essential that all regional efforts are linked and take advantage of complementary work. This will ensure not only maximum use of research experience, but also will identify areas where coordination of public policy is needed. Other grizzly bear management/research efforts in the eastern slopes and Rocky Mountains include:

Rocky Mountain Grizzly Bear Planning Committee consisting of Alberta, British Columbia, Parks Canada and Montana (Rocky Mountains scale);

- Greater Yellowhead Ecosystem Working Group Initiatives (68,000 km^2 scale);
- Eastern Slopes Grizzly Bear Study (8,000 km^2 scale); and
- Carnivore Compensation Program within the Cheviot Cumulative Effects Area (3,000 km^2 scale).

Suitable Landscape Conditions

Suitable landscape conditions are recognized as necessary to maintain and/or enhance grizzly bear population size, health and distribution within the regional ecosystem. The provision of satisfactory landscape conditions within the context of broader economic and environmental objectives will guide future grizzly bear conservation efforts. Grizzly bear experts recognize that indicators of suitable landscape conditions for grizzly bears are required in five critical areas:

1. **Habitat Effectiveness** is the comparison between the potential habitat and the realized habitat value of an area, once human disturbance has been taken into account. It is a measure of the availability of habitat to foraging individual bears. Habitat effectiveness targets and threshold values must be developed for the region.

2. **Security Area** refers to areas where female grizzly bears with cubs can forage for 24-48 hours secure from human disturbance. Literature documents the need to maintain connected security areas within grizzly bear management units. It also suggests that security area networks must constitute a minimum percentage of the high habitat effectiveness areas. These targets and threshold values will be established for the region.

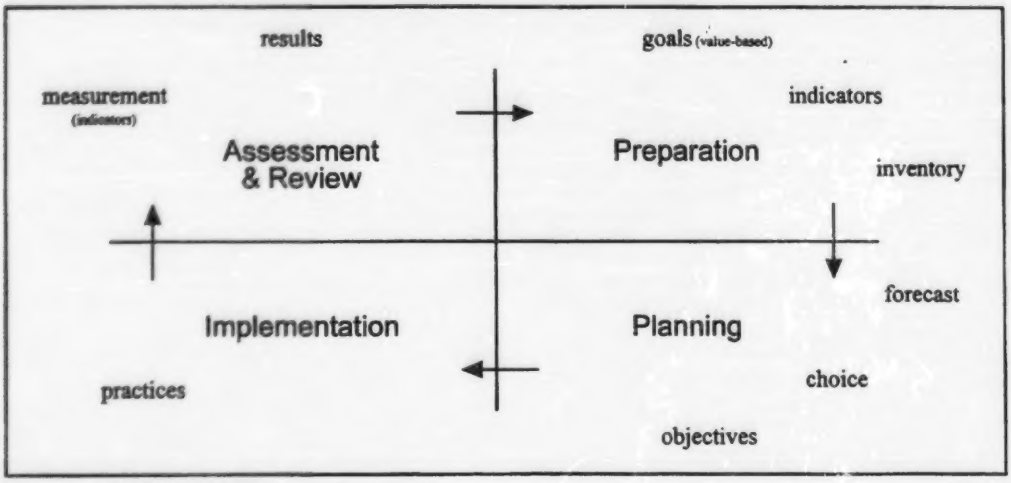
3. **Total Human-Caused Mortality** (THCM) refers to the number of known and estimated total human-caused grizzly bear mortality. A maximum THCM percentage of the estimated grizzly bear population for each Bear Management Area must be set. Provincial policy states a maximum THCM of 6% of the estimated grizzly bear population including 2% licensed hunter kill. Female grizzly bear mortality should not exceed 35% of THCM.

4. **Road Density** refers to the density and level of human activity associated with roads and trails. Previous research in other grizzly bear range shows that elevated densities of roads has an adverse effect on grizzly bear populations. Suitable road density and human activity targets and threshold values will be established for and applied to the region. As research permits, the effects of all classes of road will ultimately be considered.

5. **Habitat Connectivity** refers to the unimpeded movement between all grizzly bear population areas in the region and the opportunity for continuous distribution of grizzly bears including adult females. Fracture zones or areas where it is prohibitive or unsafe for grizzly bear movement must be identified and such zones will be evaluated for potential for recovery to effective, connected grizzly bear habitat.

This indicator approach is consistent with an adaptive management framework prepared by Simons Reid Collins (1998) (Figure 3). The above indicators are described as state indicators. It is important to understand the current landscape conditions and to forecast the evolution of these conditions. It is also important to understand whether or not these conditions are likely to achieve the goal of maintaining habitat conditions conducive to the long-term conservation of bear populations. Should this not be the case, management actions may be necessary.

Figure 3 — Adaptive Management and the Sustainable Forest Management Hierarchy



(from Simons Reid Collins, 1998)

Targets and threshold values for each indicator must ultimately be set to guide choices in management actions and to allow for an evaluation of the trade-off decisions and their costs. These targets and threshold values must be flexible enough to adapt over space and time to the multiple-use land base that occupies much of the region. Priority will be given to developing landscape condition thresholds and targets for each indicator specific to the Strategic Framework area over the next three years, through the Foothills Model Forest Grizzly Bear Research Program and the Regional Sustainable Resource and Environmental Management Strategy.

One approach to identifying suitable landscape conditions was described and modeled for the Cheviot Cumulative Effects area (BIOS Environmental Research and Planning Associates Ltd., 1996). Tools to model grizzly bear habitat conditions have been developed (Purves and Doering, 1998), and preliminary work to validate models (Lee, 1999) and describe baseline conditions (Lee and Stenhouse, 1999) is under way.

Specific landscape conditions targets in the form of quantitative threshold values are unlikely to be widely endorsed or accepted without: (1) clarification and baseline enumeration of the indicator for suitable habitat condition; (2) validation of the models used to forecast suitable landscape conditions and population responses; and (3) forecasting the impacts of achieving specified threshold values on other uses. Such values have been established in work in the northwestern USA and the Eastern Slopes Grizzly Bear Project and will be used as the beginning hypotheses for testing and arriving at landscape target and threshold values for the region (Appendix 3). Regional landscape condition thresholds will be evaluated through the Strategic Framework work plans and condition targets set through the Regional Sustainable Resource and Environmental Management Strategy.

The long-term goal will be the conservation of grizzly bears through the adoption of regionally appropriate and validated target values for grizzly bear populations and habitat that can be used in land use decisions. They can only be derived through an integrated resource management approach where trade-offs against other social values are made with full consideration of the cost. It is important to emphasize that targets represent our current understanding of suitable landscape conditions and that they may only be achieved over an extended period. They will also require continual monitoring and evaluation.

It must also be recognized that they may not be achieved in all bear management units within the Strategic Framework area. Conditions may approach or diverge from some or all of the targets at different points in time and at different locations on the landscape. Rather than being prescriptive in how the targets will be achieved, it is the intent of the Strategic Framework to rely upon the creative management approaches of the many disposition holders to achieve the target goals.

These targets can provide the context for a variety of purposes including:

- forming a basis for current and future landscape conditions;
- completing a sensitivity analysis around potential policy changes;
- providing guidance for and input into industrial and other land use planning;
- reviewing the impact of future proposals on Jasper National Park and Alberta Crown lands;
- providing an ongoing assessment of landscape condition status to support Grizzly bear populations; and
- influencing existing and future bear management plans.

Management Team

A **Regional Carnivore Management Group** (RCMG) will be established to promote cooperative approaches towards meeting bear conservation goals and will report to the Northern East Slopes Environmental Resource Committee (ERC) (Figure 4). The RCMG will include representatives of Alberta Environment, Jasper National Park and major disposition holders (forestry, oil and gas and mineral sectors). As part of its work plan (Appendix 3), this group will focus on:

- assessing current population and habitat conditions;
- recommending appropriate landscape conditions and measures of success;
- identifying opportunities for habitat maintenance and improvement;
- identifying the implications to existing dispositions;
- recommending a data management and sharing protocol;
- developing tools including development or adaptation of models and a suite of management options that can be implemented by disposition holders and policy makers;
- evaluating and recommending the orderly implementation of the Strategic Framework in the context of existing administrative mechanisms; and
- recommending a monitoring program and criteria for measuring progress.

Recommendations made by the RCMG will be submitted to the ERC. In turn, the ERC will assess these recommendations, import them to the regional strategy development project for integration with other resource values and incorporate them into other decision-making mechanisms as they are refined and integrated.

Non-disposition holders must also have opportunities to participate in and influence land use decisions. An advisory **Stakeholder Forum** is proposed that would provide input into implementation strategies. This group includes Environmental Non-Government Organizations (ENGOs), municipalities, recreational users and aboriginal groups.

A second supporting forum is the **Research Forum** headed by a Grizzly Bear Biologist. This forum would be responsible for providing scientific advice, design and delivery of supporting research and liaison with other working groups outlined under Linkages above.

Research Support

Any sound resource management program relies upon up-to-date, credible, scientific information. The supporting research program must:

- be responsive to management needs;
- integrate with other similar programs outside the defined area;
- provide for the participation of specialists within government, industry and other sectors;
- be recognized as authoritative within peer circles; and
- be open to the public.

Identify Research Needs

Figure 4 proposes a Research Forum that would be responsible for identifying research needs and recommending the research program to the RCMG. This Forum would be chaired by the Grizzly Bear Biologist.

Delivering the Research Program

The Foothills Model Forest (FMF) is an independent corporate partnership dedicated to sustainable forest management. FMF has a variety of research initiatives including one devoted to grizzly bears that, if expanded, would provide for the research needs of the Strategic Framework. This program is directed by a Board of Directors and is a full service administrative/management unit.

While the grizzly bear research program will take its primary direction from the RCMG (which is responsible to the ERC), it will be delivered as an integral component of the FMF. The FMF Board of Directors will be responsible through their accountability agreements for the effective and efficient delivery of the research program. A FMF Board Liaison would provide the link between the RCMG and FMF.

Resources

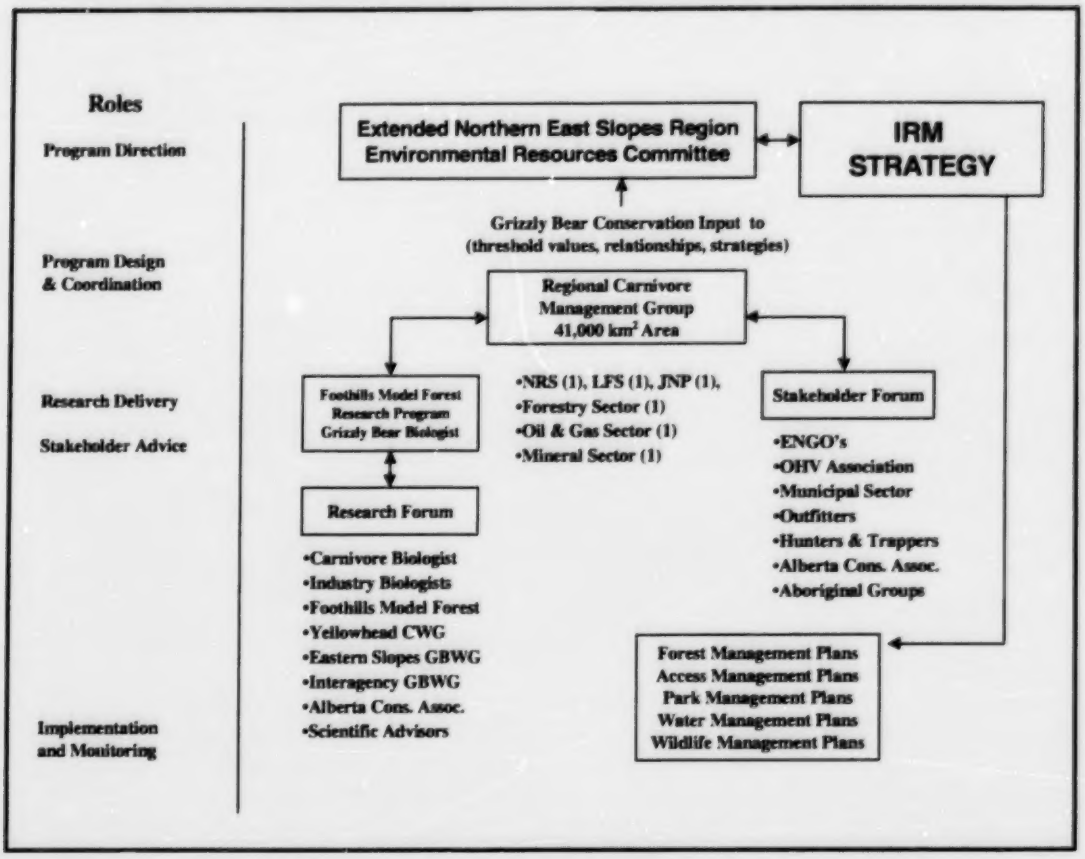
Detailed budget requirements will be determined through the work planning exercise. Some short-term seed funding will be available from Jasper National Park, Alberta Environment and the Foothills Model Forest.

Contribution funding and/or in-kind support will be needed to accomplish this ambitious program. Disposition holder participation is critical to success. As discussed in the section on benefits of the Strategic Framework, it may be motivated by contributions to the greater public good, directed mitigation and compensation, or improved efficiency or cost savings as a result of participating in a collaborative approach to finding a solution to a common problem.

Work Plan

The RCMG will complete a detailed work plan for approval of the ERC. The outline and landscape condition hypotheses described in Appendix 3 will form the basis for its detailed work plan.

Figure 4 -
Grizzly Bear Conservation in the Alberta Yellowhead Ecosystem – A Strategic Framework



Effective Dates

The Strategic Framework for Grizzly Bear Conservation will become effective upon its endorsement by the ERC. The intent is to pursue this Strategic Framework on a long-term basis. The initial framework is intended for a 10-year period with optional renewals and may be amended from time-to-time, but only with the endorsement of the ERC.

The RCMG will be in place for a 5-year period unless otherwise agreed by the ERC. The RCMG may be reconvened by the ERC to provide advice on progress and program adaptation.

Termination

Due to the long-term nature of the management structures to be implemented under the Strategic Framework for Grizzly Bear Conservation, it should not be terminated before January 1, 2010.

Glossary of Terms

Note: The following definitions are not explicit or binding, but meant to assist the reader in more fully understanding the context and intent of this Strategic Framework.

Carnivore Compensation Program (CCP) refers to the approach proposed by Cardinal River Coals (BIOS Environmental Research and Planning Associates Ltd., 1996) to compensate for unmitigatible loss of carnivore habitat in the Cheviot Cumulative Effects Study Area. The Joint Federal/Provincial Panel adopted this approach.

Consensus refers to an agreement by all participants. Consensus is reached when participants agree to a package that addresses the entire range of issues. Each participant supports the overall agreement. Participants may not support all aspects of the agreement, but they do not disagree enough to reject the total package.

Grizzly Bear Management Unit (GBMU) refers to an area of grizzly bear habitat equivalent in size to the home range of a female grizzly bear.

Habitat effectiveness is the comparison between the potential habitat and the realized habitat value of an area, once human disturbance has been taken into account.

Health in the context of grizzly bears means populations that are viable, non-declining and connected on the landscape.

Joint Review Panel refers to the joint Alberta Energy Utilities Board and Canadian Environmental Assessment Agency review panel of the proposed Cheviot Coal Project, Mountain Park, Alberta - EUB Applications No. 960313, 960314 and 960677.

Northern East Slopes Environmental Resources Committee (ERC) is a forum for integrating the management and administration of the environment and natural resources of the Northern East Slopes Region. The ERC membership includes the Regional Director, Land and Forest Service, Alberta Environment; Regional Director, Natural Resources Service, Alberta Environment; Regional Director, Environmental Service, Alberta Environment; Regional Environmental Coordinator, Environmental Service, Alberta Environment; Manager, Mineral Access and Development, Alberta Resource Development; Head, Public Lands, NWB Region, Agriculture Food and Rural Development; Director, Resource Management and Development, Alberta Economic Development; Section Coordinator, Resources Division, Alberta Energy & Utilities Board; and Manager, Ecosystems Secretariat, Jasper National Park.

Resiliency refers to the ability of wildlife to absorb disturbance and still persist.

NES Resource and Environmental Management Strategy Prototype refers to the ongoing development of a regional vision for sustainable resource use considering the economy, environment and community of the region now underway under the direction of the Northern East Slopes ERC.

Security Area refers to areas where adult female grizzly bears can forage for 24-48 hours, secure from human disturbance (Mattson, 1993).

Strategic Framework is a document developed by the Northern East Slopes Environmental Resource Committee, in consultation with its key stakeholders, that outlines the strategic approach taken and coordinating mechanisms used to achieve grizzly bear conservation.

Targets refers to landscape condition values or range of values which represent the ideal conditions for the long-term persistence of grizzly bears.

Thresholds refers to landscape condition values, or range of values, below which scientific evidence suggests that the long-term persistence of grizzly bears cannot be assured.

Total human-caused mortality (THCM) refers to the total number of known and estimated total grizzly bear mortalities attributable to human causes.

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Approval Page

Signed this 17th day of February, 2000.

Members of the Northern East Slopes Extended Environmental Resources Committee approve the Grizzly Bear Conservation Strategic Framework for implementation.

Mike Poscente
Regional Director
Land & Forest Service
Alberta Environment

Jim Skrenek
Regional Director
Natural Resources Service
Alberta Environment

Bill Macdonald
Regional Director
Environmental Service
Alberta Environment

Andy Lamb
Regional Environmental Coordinator
Environmental Service

Rhonda Wehrhahn
Alberta Resource Development

Gerry Dube
Alberta Agriculture, Food and Rural Development

Ron Hooper
Superintendent
Jasper National Park

Appendix 1

(Excerpts from Federal Government Response to the Environmental Assessment Report of the EUB-CEAA Joint Review Panel on the Cheviot Coal Project)

WILDLIFE

1. Carnivores (Grizzly Bears)

Response by the Government of Canada

The Government of Canada's objectives for ecological integrity for Jasper National Park, a World Heritage Site must be safeguarded, as the potential remains for the proposed mine to adversely impact the Park. Cumulative effects of the proposed mine remain a threat to the viability of indicator species such as grizzly bears.

The Government of Canada believes there are measures for the protection of carnivore populations beyond those recognized by the Panel. Specifically, measures are needed to ensure the maintenance of viable, connected populations of grizzly bears in the Cheviot Cumulative Effects Assessment Area that includes the mine and the adjacent portion of Jasper National Park.

The federal government must work in partnership with Alberta to ensure transboundary environmental effects, which would threaten the long-term persistence of grizzly bear populations in Jasper National Park are mitigated.

To date, a process has been developed which provides for participation of federal government departments as members of two provincial decision-making committees which will determine detailed conditions and mitigation as individual elements of the project proceed (i.e., the ERC and the Cheviot Project Steering Committee).

A letter from Alberta to this effect is attached. [Appendix 2]

In addition, with specific reference to grizzly bears, an understanding has been reached with the Province of Alberta, which provides for the establishment of an agreement for integrated grizzly bear management based upon scientific evidence, to ensure persistence of grizzly bear populations. These plans will respond to the major elements of proposals presented by Parks Canada to the Panel.

Another letter from Alberta to this effect is attached. [Appendix 2]

Parks Canada will lead with regard to the federal role with respect to grizzly bears.

A federal/provincial agreement on a regional mitigation plan is required for achieving specific ecological conditions that support a persistent grizzly population. The mitigation plan should achieve the following key ecological conditions.

Both governments have agreed to complete, in an expeditious manner, the establishment of working agreements on mitigation. These will cover a geographic area that encompasses the Cumulative Effects Assessment Area and will include, but not be limited to, restoring these landscape conditions that are necessary to ensure the persistence of a regionally-connected grizzly bear population, the appropriate tools, processes and time frames, as well as identification of the measures of success. The plan will serve as a guide to the Carnivore Compensation Program.

The Government of Canada will participate on two provincial decision-making committees (the Alberta Conservation and Reclamation Review Committee and the Alberta Northern East Slopes Environmental Resource Committee) to develop more detailed site mitigation measures prior to the issuance of further provincial permits.

2. Cumulative Effects Assessment and Land Use Management

Response by the Government of Canada

The Government of Canada maintains that, with respect to potential impacts on regional wildlife, cumulative effects need to be further addressed, particularly considering that other planned land use activities, such as forestry, were not considered. Mechanisms beyond those considered by the Panel will be pursued to enhance the cumulative effects assessment. Methods, such as core area analysis, are fundamental in grizzly bear assessments. The Government of Canada considers it essential that such an analysis be completed and that the results be incorporated into the proponent's ongoing mitigation program. This should be a key goal of the Carnivore Compensation Program.

The Government of Canada and the Government of Alberta will cooperatively develop ecosystem goals and principles that cover, at a minimum, the anticipated cumulative effects area of the proposed project. These goals and principles will provide terms of reference for the Carnivore Compensation Program along with levels of proponent and land manager participation.

The Government of Canada also proposes that the Carnivore Compensation Program build on the momentum established in existing cooperative land management programs such as the Foothills Model Forest.

Appendix 2

(Text of letters dated September 23, 1997 from J.R. Nichols, Acting Deputy Minister, Alberta Environmental Protection to Mr. Wayne Wouters, Deputy Minister, Fisheries and Oceans Canada, Mr. Ian D. Glen, Deputy Minister, Environment Canada, and Mr. Thomas Lee, Assistant Deputy Minister, Parks Canada)

September 23, 1997

Dear Sirs:

The Government of Alberta is pleased with the progress to date on the involvement of federal agencies in provincial regulatory and resource management processes associated with the Cheviot Coal Mine Project.

As discussed in previous meetings and correspondence, the Conservation and Reclamation Review Committee and the Northern East Slopes Environmental Resources Committee are the key provincial bodies that will administer the province's responsibilities on the Cheviot project. Pursuant to section 12(b) of the *Environmental Protection and Enhancement Act* this letter is our formal invitation to the federal government to be represented on both committees. Representatives of the federal government will be able to participate on an equal basis with other members on the committees.

Conservation and Reclamation Review Committee. This committee is responsible for on-site environmental issues that are addressed through the approvals required under the *Environmental Protection and Enhancement Act* and the *Water Resources Act.* As such, the committee deals with the on-site protection of air and water quality, water resources, fisheries, and wildlife. It also ensures that successful reclamation will take place.

The Conservation and Reclamation Review Committee will conduct the technical review of Cardinal River Coal's application for the approval required under the *Environmental Protection and Enhancement Act*. Members of the committee are expected to review the application from their technical area of interest, explain and discuss their findings with the committee, participate in the drafting of requests for any supplementary information that may be required, and take part in the preparation of draft approval conditions for the consideration of the Director of Land Reclamation. The committee conducts tours of the project area and holds meetings with the applicant as needed.

With respect to matters of federal interest on the Cheviot project, the key agencies with an interest in the project appear to be Fisheries and Oceans Canada, Environment Canada and Parks Canada. The federal government is welcome to send a representative from each agency to the Conservation and Reclamation Review Committee. Other technical staff are also welcome to attend as may be required from time to time for specific issues that may arise. Other federal agencies that have an interest may attend as appropriate.

Northern East Slopes Environmental Resources Committee. The Environmental Resource Committee (ERC) is responsible far off-site issues such as the integration of regional development access control, and the management of wildlife and fisheries resources. The committee implements policy and coordinates programs related to environmental protection and resource management. Individual committee members deliver the programs. It can also make recommendations with respect to regulatory approvals and surface dispositions that are issued to operators. In the context of the Cheviot project, the committee would provide the framework for dealing with the Coal Branch Access Management Plan and the Carnivore Compensation Program. The committee would also be responsible for evaluating any fisheries habitat compensation that may arise off the Cheviot site, as well as other issues that may arise from time to time.

With respect to the Carnivore Compensation Program and specifically grizzly bear management, Alberta Environmental Protection acknowledges that one goal will be to restore those landscape conditions that are necessary to ensure the persistence of a regionally connected grizzly bear population. Alberta Environmental Protection is confident that workable plan will be developed with federal government participation at the Northern East Slopes Environmental Resource Committee and the Conservation and Reclamation Review Committee along with the participation of other stakeholders.

With respect to participation on the Environmental Resource Committee, the federal government is welcome to send representation from .agencies with an interest in regional matters that arise in association with the Cheviot project. The key agencies would appear to be the same as those cited for the Conservation and Reclamation Review Committee.

Once again, thank you for the discussions that have taken place to date. Please advise Mr. Larry Brocke at your earliest convenience as to who will be representing the federal government on the two committees. Mr. Brocke can be reached at (463) 427-6202.

Sincerely,
J.R. Nichols
Acting Deputy Minister

September 23, 1997

Dear Mr. Lee:

The Department of Environmental Protection agrees that one primary goal of a grizzly bear management plan in the Cheviot Mine study area would be to restore or maintain those landscape conditions necessary to ensure the persistence of a regionally connected population of grizzly bears.

Representatives from Alberta Environmental Protection and Parks Canada have agreed that threshold values for landscape conditions required to maintain grizzly bears within the study area are necessary. These values, such as habitat effectiveness, mortality, open road density, security area network and habitat connectivity are based on the scientific advice presented to the panel by Parks Canada.

It is understood that threshold values will require ongoing verification and evaluation. Management within these values is considered necessary to maintain and enhance grizzly bear populations size and distribution.

I am confident that through Parks Canada's participation at the Conservation and Reclamation Review Committee and the Northern East Slopes Environmental Resources Committee working agreements can be achieved expeditiously.

Sincerely,

Originally Signed by:

J.R. Nichols
Acting Deputy Minister

Appendix 3

Work Plan Outline and Landscape Condition Hypotheses

The Regional Carnivore Management Group will complete a detailed work plan for approval of the ERC. It will include, but not be limited to:

- an assessment of respective on-going programs to determine the degree to which they can contribute to the objectives of the Strategic Framework;
- an evaluation of current land use patterns, ecological conditions, commitments and habitat condition and identification of areas most likely to be impacted by future development and areas where maintenance of conditions will achieve the most good;
- evaluation of existing habitat effectiveness, security area and linkage zone models and adjustment to these or development of new models;
- evaluation of habitat effectiveness value of reclamation efforts;
- a proposal for further validation of suitable landscape conditions and for adjusting these values at different scales;
- a suite of performance measures to evaluate the performance of the Strategic Framework and land and resource manager's actions to meet the goals of the Strategic Framework;
- a specific strategy for stakeholder participation with rationale;
- develop alternative funding and participation strategies;
- identification of prioritized resources required to implement the Strategic Framework;
- development of a process for the orderly implementation of the Strategic Framework goals and objectives;
- establishing the stakeholder and research forums and initiating consultation; and
- initiating a comprehensive communications program to ensure that all participants and the public at large understand the program, its objectives and progress.

It is very important to recognize the iterative nature of the process. It is also important to undertake a first iteration that would involve evaluation of existing indicators and inventory information, forecasting of impacts with the existing models and identifying critical emphasis areas requiring early intervention. This would serve to focus attention, prioritize information weaknesses and research needs.

Landscape Condition Hypotheses

The Regional Carnivore Management Group will give particular priority to assessing threshold and target values established elsewhere and developing appropriate landscape condition values for the Strategic Framework area within 3 years. The following values or range of values have been established through grizzly bear research programs elsewhere in Canada and the United States. These values or range of values will be used as the working hypotheses.

- A **habitat effectiveness** value of 70-80% is seen as a minimal target for grizzly bear habitat conservation purposes. At the same time, it is recognized that it may not be possible to meet this target in all portions of the landscape through time.

- **Total human-caused mortality should not exceed 6%, including a licensed hunter kill of 2%, of the estimated grizzly bear population for each Alberta Bear Management Area. Female grizzly bear mortality should not exceed 35% of total known human-caused mortality for each Bear Management Area**. As per the Alberta Provincial Grizzly Bear Management Plan, at the option of Alberta Environment, when the targeted grizzly bear population of 1000 animals in the province is achieved, licensed hunter mortality may rise to 4% of estimated grizzly bear population for each Bear Management Area outside of Jasper National Park.

- The concern over the **density of roads** and the level of associated human activity will be a major focus of the program's research component. Previous research in other grizzly bear ranges has shown that a density of all weather roads greater that 0.3 kilometers per square kilometer has an adverse effect on grizzly bear populations. Ideally, the density and human use of all roads should ultimately be evaluated.

- There is a recognized need to maintain connected **security areas** within grizzly bear management units. Security area is defined as an area where a female grizzly bear can forage for a minimum of 24-48 hours without disturbance. Security areas are a minimum of 9 km^2 in size. As an initial target, the core security area network will constitute 60-67% of the area with habitat effectiveness greater than 70-80%. Ongoing analysis and research in areas with lower habitat effectiveness ratings will improve our understanding of grizzly bear habitat use in a multiple use land base and allow for the development of management tools and approaches to minimize impacts on current and future security areas.

- **Habitat connectivity** is an important consideration for grizzly bear habitat management purposes. Habitat connectivity requires unimpeded movement between all grizzly bear population areas in the region and the opportunity for continuous distribution of female grizzly bears. **Fracture zones**, which are areas where it is prohibitive or unsafe for grizzly bear movement, will require determination. Fracture zones will be evaluated for potential for recovery to effective grizzly bear habitat. Recovery plans or mitigation plans to address fracture zones will be required.

- Habitat units rated as high or very high quality and landscape connections between such units should be given special consideration. It should be recognized that habitat quality changes through time and with ecological disturbances.

Interim Process

During the three year period when the RCMG is developing its recommended threshold and target values for indicators, it will be necessary to have a process to deal effectively with new development proposals. Such an interim process must be able to identify and deal effectively with issues of concern related to grizzly bear conservation. A mechanism is needed to arrive at consensus on how maximum habitat effectiveness and security areas can be achieved in areas of high quality grizzly bear habitat or connectivity. Similarly, an agreed upon approach to replacing habitat lost in and outside of bear management units will be needed.

The RCMG will develop this interim process to guide evaluation of development proposals as they relate to the goals and objectives of the Strategic Framework.

Appendix 4

TERMS OF REFERENCE
NORTHERN EAST SLOPES
ENVIRONMENTAL RESOURCE COMMITTEE

1. ROLE OF THE NORTHERN EAST SLOPES ENVIRONMENTAL RESOURCE COMMITTEE

The Northern East Slopes (NES) Environmental Resource Committee (ERC) will constitute a forum for integrating the management and administration of Alberta's environment and natural resources and for enhancing community level service. To promote ecosystem sustainability, the ERC will work in partnership with its clients in decision-making and program delivery.

2. MEMBERSHIP

Members:

Alberta Environment (AENV) Members:

Environmental Service	Regional Director
Land and Forest Service	Regional Director
Natural Resources Service	Regional Director
Environmental Service	Regional Environmental Coordinator

Interdepartmental Members:

Agriculture, Food and Rural Development	Public Lands Division
Economic Development	Resource Management &
Development	
Resource Development	Mineral Access Geology & Mapping
Energy Utilities Board	Resources Division

- Members are expected to attend all meetings. Alternates may attend at times when the ERC member is required to be absent.

Intergovernmental Members:

Jasper National Park	Ecosystems Secretariat
Environment Canada	Canadian Wildlife Service

- Intergovernmental members' attendance is optional depending upon agenda items relevant to their interests and jurisdiction.

Municipal/Industrial Stakeholder Members:

- Municipal Government elected officials and representatives of industry and non-government organizations will be invited to attend special ERC meetings and will be considered ERC members for those special meetings only.

3. PROCEDURES

- Regular ERC meetings will be held on the third Thursday of every month. Meeting locations will be moved throughout the region to encourage local councils and key stakeholders to bring items to the table.

- Special ERC meetings will be held quarterly in conjunction with the regularly scheduled ERC meeting. These meetings will provide an opportunity for members to discuss integrated resource management initiatives with municipal government, industrial and non-government stakeholders and to obtain feedback and advice on these initiatives.

- The Regional Environmental Coordinator (REC), Environmental Service, Alberta Environment will chair the ERC meetings.

- The REC is responsible for the agenda, minutes, correspondence, recording decisions, forwarding decisions and undertaking follow-up activities as directed by the ERC. Approved minutes of the ERC will be distributed to all members and extended members, AENV Managers in the NES, RECs in other regions and the AENV ADMs and DM offices.

4. BUSINESS

- The ERC's goal is to develop a highly interdependent team that operates in an atmosphere of mutual respect, fairness and trust and with a commitment to common objectives. ERC business is based on negotiation and consensus.

4.1. Partnerships

- The ERC will strive to develop partnerships with other levels of government, industry and non-government organizations.

4.2. Natural Resource Planning

- Regional planning needs and priorities for the region will be developed annually by a working group on integrated planning and will be reviewed and approved by the ERC.

- Completed integrated management plans will be approved by the ERC.

4.3. Natural Resource Information

- Regional resource information priorities and workplans will be developed annually by a working group and will be reviewed and approved by the ERC.

4.4. Integration of Decision-making

- The ERC will provide a forum for the integration of decision-making on natural resource management and administration at the policy, program and operational levels (jurisdictional mandates of participating line agencies will be respected). The intent is to add value to land and resource management decisions made in the region.

Appendix 5

Stakeholder Consultation Process

The following outlines the stakeholder consultation process that was followed during the development of the Strategic Framework for Grizzly Bear Conservation.

March 1998	Copies of the draft Strategic Framework document were sent to a number of regional stakeholders and invitations to attend focus group sessions to discuss the Strategic Framework further were extended.
April-May 1998	Focus group meetings were held with a number of stakeholder groups including the forestry, oil & gas and mining industries, municipal governments and environmental non-government organizations (list of attendees attached).
May 1998	Notes from the Focus Group meetings were circulated and plans to hold a 1-2 day workshop to review and finalize the revised draft of the Strategic Framework were initiated.
August 1998	Design Advice meeting held with industry and municipal government representatives on how to proceed with consultation. The group agreed that an intensive workshop with industrial disposition holders would be most appropriate to attempt to resolve some of the significant concerns these stakeholders had with the document (list of attendees attached).
October 1998	Two-day workshop held with industrial stakeholders to discuss major issues and concerns and come to some resolution. A number of suggested revisions were identified and transmitted to the Northern East Slopes ERC (list of attendees attached).
Jan-May 1999	Grizzly bear research program developed under the administration of the Foothills Model Forest.
May 1999	Letter of invitation to attend further focus group sessions to review the revised Strategic Framework document sent to all individuals who attended the October workshop.
July 1999	Focus group session held with forestry, oil & gas and mining industries to review the revised Strategic Framework and suggest further revisions (list of attendees attached).
October 1999	Final draft Strategic Framework document to be circulated to all stakeholders for final review and approval.
February 2000	Final endorsement and sign-off of Strategic Framework by Northern East Slopes Environmental Resource Committee.

April/May 1998 Focus Group Meetings
Industry/Stakeholder Attendees

Municipal Government Representative Meeting – April 21, 1998

Ross Risvold, Town of Hinton
Floyd McLennan, Town of Grande Cache
Gary Mahon, Town of Edson
Dwight Davidson, Town of Whitecourt
Jim Skrenek, NRS – AEP
Jeff Kneteman, NRS – AEP
Dennis Cox, LFS – AEP
Scot McLure, ES – AEP
Andy Lamb, ES – AEP
Doug Hodgins, Jasper National Park
Paul Galbraith, Jasper National Park

Petroleum and Natural Gas Company Representatives Meeting – April 22, 1998

Gail Armitage, Canadian Association of Petroleum Producers
John Kerkhoven, Petro Canada
Laun Bell, Nova Corporation
Robin King, AEUB
Jill Bell, AEUB
Claire Foulds, Alberta Energy
Jim Skrenek, NRS – AEP
Jeff Kneteman, NRS – AEP
Bruce Cartwright, LFS – AEP
Andy Lamb, ES – AEP
Doug Hodgins, Jasper National Park
Paul Galbraith, Jasper National Park

Coal Mine Company Representatives Meeting – April 23, 1998

Darin Stepaniuk, Smoky River Coal
Trent Enzsol, Manalta Coal – Gregg River Mine
Bob Logan, Cardinal River Coals – Cheviot Mine Project
Al Watson, Cardinal River Coals – Luscar Mine
Fred Kuzmic, Obed Mountain Coal
Robin King, AEUB
Jill Bell, AEUB
Jim Skrenek, NRS – AEP
Jeff Kneteman, NRS – AEP
Andy Lamb, ES – AEP
Doug Hodgins, Jasper National Park
Paul Galbraith, Jasper National Park

Forest Industry Representatives Meeting – April 23, 1998

Dan Gilmore, Canadian Forest Products
Greg Branton, Alberta Newsprint Company
Tony Dozorec, Weyerhaeuser – Grande Cache
Darrell Misner, Sundance Forest Industries
Darryl D'Amico, Blue Ridge Lumber
Bob Udell, Weldwood of Canada
Chris Spytz, Weldwood of Canada
Dave Presslee, Weldwood of Canada
Jim Skrenek, NRS – AEP
Jeff Kneteman, NRS – AEP
Kyle Clifford, NRS – AEP
Dennis Cox, LFS – AEP
Andy Lamb, ES – AEP
Doug Hodgins, Jasper National Park
Paul Galbraith, Jasper National Park

Environmental and Recreational Representatives Meeting – May 21, 1998

Alison Dinwoodie, Alberta Native Plant Council
John Frank, Alberta Trappers Association
Connie Bresnahan, Alberta Wilderness Association
Rocky Notnes, Alberta Wilderness Association
Andy von Busse, Alberta Fish and Game Association
Jim Skrenek, NRS – AEP
Larry Williams, ES – AEP
Andy Lamb, ES – AEP
Rhonda Wehrhahn, Alberta Energy
Doug Hodgins, Jasper National Park
Paul Galbraith, Jasper National Park

Achieving Grizzly Bear Conservation
Design Advice Meeting Attendees
August 17, 1998

Jerry Sunderland, Land and Forest Service – AEP
Doug Hodgins, Jasper National Park
Rhonda Wehrhahn, Alberta Energy
Bob Logan, Cardinal River Coals Ltd.
Rick Bonar, Weldwood of Canada Ltd.
Ross Risvold, Town of Hinton
Jim Gendron, Equus Consulting Group Inc.

Achieving Integrated Grizzly Bear Conservation
Industry Stakeholders Workshop Attendees
October 21 and 22, 1998

Jill Baker, Alberta Energy and Utilities Board
Rick Bonar, Weldwood Canada Ltd.
Darryl D'Amico, Blue Ridge Lumber
Neil Dibble, Mobil Oil
Trent Enzsol, Gregg River Mine
Rick Ferster, Luscar Ltd.
Jim Gendron, Equus Consulting
Bernie Morin, Canadian Forest Products
Stephen Herrero, BIOS Environmental Planning & Research Associates
John Kansas, Luscar Ltd.
John Kerkhoven, Petro Canada
Jeff Kneteman, NRS – AEP
Fred Kuzmic, Obed Mtn Coal
Bob Logan, Cardinal River Coal
Beth MacCallum, Big Horn Environmental Ltd.
Jim McCammon, Alberta Newsprint Company
Dane McCoy, Luscar Sterco
Darrel Misner, Sundance Forest Industries
Luigi Morgantini, Weyerhaeuser of Canada Ltd.
Brad Pepper, Nova Corporation
Brian Provo, Nova Gas
Chris Spytz, Weldwood of Canada
Bruce Stewart, Petro Canada
Cecil Vanderveer, Inland Cement
Chris Walsh, Ulster Petroleum
Peter Zimmerman, Amoco Canada
Terry Walker, AEC West

Government Agencies:

Rhonda Wehrhahn, Alberta Energy
Kevin Williams, Alberta Energy
Lisa Risvold, Foothills Model Forest
Dennis Cox, LFS – AEP
Russ Stashko, NRS – AEP
Rob Mueller, LFS – AEP
Julie Dugas, Foothills Model Forest
Bruce Cartwright, LFS – AEP
John Allard, Jasper National Park
George Mercer, Jasper National Park.
Doug Hodgins, Jasper National Park
Ron Hooper, Jasper National Park
Andy Lamb, ES – AEP
Jeff Kneteman, NRS – AEP
Jim Skrenek, NRS – AEP
Gord Stenhouse, NRS – AEP
Jerry Sunderland, NRS – AEP
Patsy Vik, ES – AEP

Achieving Integrated Grizzly Bear Conservation
Focus Group Session Meeting Attendees
July 9, 1999

Industry Representatives

Bob Logan, Cardinal River Coal – Cheviot Mine Project
Peter Zimmerman, Amoco Canada
Dave Presslee, Weldwood of Canada
Hugh Lougheed, Weldwood of Canada
Chris Spytz, Weldwood of Canada
Jim McCammon, Alberta Newsprint Company
Darrell Misner, Sundance Forest Products

Government Agencies

Gord Stenhouse, NRS – AENV
Jim Skrenek, NRS – AENV
Doug Hodgins, Jasper National Park
Rhonda Wehrhahn, Alberta Resource Development
Jill Baker, Alberta Energy and Utilities Board
Andy Lamb, ES – AENV

Working Group

The following working group was instrumental in drafting the final wording of the Strategic Framework:

Industry Representatives

Rick Bonar, Weldwood of Canada
Bob Logan, Cardinal River Coals
Peter Zimmerman, BP Amoco Canada

Government Agencies

Jim Skrenek, NRS – AENV
Mike Poscente, LFS – AENV
Doug Hodgins, Jasper National Park